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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,307	08/23/2001	Veijo T. Suorsa	9345.17121-CIP B	1991

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[REDACTED] EXAMINER

SMITH, RUTH S

ART UNIT	PAPER NUMBER
3737	

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/938,307	SUORSA ET AL.
	Examiner Ruth S. Smith	Art Unit 3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 April 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-10 and 12-27 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-10 and 12-27 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 23 August 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 8/05, 10/05, 4/06.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 7, 2006 has been entered.

***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "30" has been used to designate both a power cord and an interconnect. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The disclosure is objected to because of the following informalities: Page 6 of the specification refers to figure 4 as showing an assembly 12, however, figure 4 fails to show such an assembly. Page 12 refers to assembly 54 as being used to secure the applicator to a patient's thorax. It is unclear as to how the assembly 54 can provide such a function. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

Claims 1-10,12-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

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was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It does not appear that the bubbles would rise into the well in figure 11 based upon the principle of gravity. It appears that buoyancy would cause the bubbles to rise.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10,12-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talish et al ('070) in view of Peterson et al ('619),Winder et al and Meyers. Talish et al disclose a system for applying ultrasound to the thoracic cavity of a patient comprising an electric signal generating machine 12, an ultrasound applicator 16, and an assembly for placing the applicator on the patient to stabilize placement of the housing on the chest of the patient. The device of Talish et al would inherently include the features as set forth in claims 3,4,20,21. As seen in figures 19-22, the applicator includes a housing that holds a fluid (gel), an ultrasound conducting interface, a contour-conforming interface with skin, a skirt, and a coupling assembly. Talish et al

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fails to specifically disclose the operating parameters of the ultrasound energy or the use of a circulating fluid. Talish et al disclose that the transducer of Winder et al can be used. Winder et al disclose using pulsed ultrasound where the duty cycle of the ultrasound waves is between 5 and 90 percent. It would have been obvious to one skilled in the art to have modified Talish et al such that it operates with a pulsed ultrasound wave using the device disclosed by Winder et al in view of Talish et al disclosed selection of such a transducer. It is a well known expedient in the art to use pulsed ultrasound rather than continuous wave in order to prevent undesired heating to tissue. Peterson et al is just one example of many which disclose the operating parameters of the therapeutic ultrasound as set forth in the claims. The application of ultrasound at the levels provided would inherently result in the increase of blood flow. It would have been obvious to one skilled in the art to have further modified Talish et al such that the operating parameters are as taught by Peterson et al in that such are well known operating parameters for therapeutic ultrasound which will not cause harm to the patient. With respect to claim 13, it is known to use a coupling agent to couple the ultrasound into the body without attenuation caused by it passing through air. It is well known to use circulating water as this agent as seen in Peterson et al. Therefore, it would have been obvious to one skilled in the art to have further modified Talish et al such that the gel is replaced by circulating water as the coupling agent. Such a modification merely involves the substitution of one well known type of coupling agent for another. Peterson et al further disclose the use of a bubble trap which is well known expedient in the art to prevent bubbles from interfering with the operation of the device. It should be noted that in the absence of any showing of criticality or unexpected results, the specific type of bubble trap used would have been an obvious matter of design choice, however, Meyers discloses an ultrasound device that includes a bubble trap comprising a well region 28 surrounding the transducer radiating surface. It would have been obvious to one skilled in the art to have further modified Talish et al such that it includes a region surrounding the radiating surface of the transducer that is used to collect bubbles formed in the coupling media. Such a modification merely allows the use of a bubble trap in the device of Talish as is well known in order to prevent the

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bubbles from interfering with the operation of the device. With respect to claims 7,10,24,27, the specific frequency selected would have been obvious to one skilled in the art without undue experimentation in order to achieve the desired effect.

***Response to Arguments***

Applicant's arguments with respect to claims 1-10,12-27 have been considered but are moot in view of the new ground(s) of rejection. It should be noted that while applicant states that claims 1-10,12-28 are pending, claim 28 has been cancelled.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth S. Smith whose telephone number is 571-272-4745. The examiner can normally be reached on M-F 7:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ruth S. Smith  
Primary Examiner  
Art Unit 3737

RSS